

Figure 1

No.	Heat treatment atmosphere	Heat treatment temperature [°C]	Heat treatment time [hr]	HcJ [Oe]	Br [G]	Hk/HcJ [%]	W-phase ratio [mol%]
1	No heat treatment			2845	4455	90.1	75
2	Air	800	1	1586	4402	60.2	45
3	N ₂ gas	700	0.167	3516	4580	94.2	–
4		800		3589	4626	90.6	80
5		900		3693	4635	88	–
6		1000		3650	4623	90.7	–
7		700	1	3663	4620	93.8	–
8		800		3699	4638	94.6	83
9		900		3693	4595	93.1	–
10		1000		3583	4580	94.2	–
11		700	6	3595	4656	90.4	–
12		800		3669	4684	90.3	85
13		900		3644	4620	96	–
14		1000		3553	4620	95	–

Figure 2

No.	Oxygen concentration [vol%]	Heat treatment temperature [°C]	Heat treatment time [hr]	HcJ [Oe]	Br [G]	Hk/HcJ [%]	W-phase ratio [mol%]
15	0.02	800	1	3690	4623	94.1	81
16	0.5			3598	4601	91.5	74
17	1			3502	4571	90.3	71
18	5			3271	4539	87.5	59
19	8			3122	4516	86.2	55
20	15			2432	4465	63.1	49
2	20			1586	4402	60.2	45

Figure 3

Composition	Heat treatment atmosphere	Heat treatment temperature [°C]	Heat treatment time [hr]	HcJ [Oe]	Br [G]	Hk/HcJ [%]	W-phase ratio [mol%]
X	No heat treatment			2207	4328	87	71
	Air	800	1	1355	4257	54	39
	N ₂ gas			3023	4512	86	73
Y	No heat treatment			2054	4319	86	75
	Air	800	1	1580	4249	41	33
	N ₂ gas			3101	4520	88	71
Z	No heat treatment			1998	4379	85	76
	Air	800	1	1441	4233	33	29
	N ₂ gas			3004	4562	87	81